

Approved October 25, 1999

U.S. Environmental Protection Agency
Science Advisory Board
Committee: Advisory Council on Clean Air Compliance Analysis (Council)

Summary Minutes of Public Teleconference
Date: October 1, 1999

Committee Members: (See Roster - Attachment A.)

Date and Time: 11:00am-2:30 pm, October 1, 1999 (See Federal Register Notice - Attachment B).

Location: Ariel Rios North, Conference Room 6013

Purpose:

- (1) To review a Letter Advisory prepared by the Health and Ecological Effects Subcommittee (HEES)
- (2) To finalize a Council Letter Advisory
- (3) To review the August draft of the Prospective Study in light of three Charge Questions

Attendees: Chair: Dr. Maureen Cropper; Committee Members and Consultants: Drs. Gardner Brown, A. Myrick Freeman, Don Fullerton, Lawrence H. Goulder, Jane V. Hall, Charles Kolstad, Lester B. Lave, Paul Lioy, Paulette Middleton, and Alan J. Krupnick. ; Other SAB Members and Consultants participating: Drs. Mort Lippmann, Timothy Larson, George Wolff; SAB Staff: Angela Nugent , Designated Federal Official; Other Persons Attending: Mr. James DeMocker (EPA, Office of Air and Radiation), Dr. Brian Heninger (EPA, Office of Policy), Ms. Anne Watkins (EPA, Office of Air and Radiation); Dr. Bryan Hubble (EPA, Office of Air and Radiation); Mr. Sam Napolitano (EPA, Office of Air and Radiation); Mr. Robert Brenner (EPA, Office of Air and Radiation); Dr. Jim Neumann (IEc); Dr. Henry Roman (IEc); Jared Hardner (IEc); Mr. Jim Wilson (Pechan Avanti); Dr. Leland Deck (Abt); Mr. Don McCubbin (Abt); Dr. Ellen Post (Abt); Ms. Naomi Kleckner (IEc); Rachel Urdman (Inside EPA); David Slaughter (Thompson Publishing Group); Heidi R. King of OMB/OIRA , and JeanVernet (Department of Energy).

Meeting Summary:

The meeting followed the issues and general timing as presented in the meeting Agenda, except where otherwise noted (see Meeting Agenda - Attachment C). The teleconference lasted until 2:30 pm. There were no written comments submitted to the

Committee, and there were no written requests to present public comments during the discussion.

Welcome and Introductions - Dr. Maureen Cropper, the Chair, opened the session at 11:00 a.m. welcoming members and consultants (Roster, Attachment A), and reviewed the agenda (Attachment C). Dr. Angela Nugent, Designated Federal Official (DFO) for the Council requested that panel members make a voluntary statement for the record regarding any new research and interests related to the review topic. No items were identified.

Discussion of Council's Letter Advisory Reviewing the June draft Section 812 Study.

The committee identified major and minor additions to the Council Letter Advisory based on review of the August draft. It accepted the draft conditional to these changes being made and the redraft circulated among Council members.

1. Change wording on p. 3:

"We draw special attention to the weak evidentiary basis for use of chronic bronchitis WTP estimates, even though we agree with the Agency. that those estimates are the best available." becomes "We draw special attention to the need for additional studies of WTP to reduce chronic bronchitis risk, even though we agree that the Agency is using the best estimates available."

2. Change wording on p. 7 :

". . . the Council believes that the input data used by the Agency is flawed. . . ." to ". . . the Council believes that the input data used by the Agency have limitations..."

3. Revise wording for p. 8 of the Draft Council Advisory: Old wording: The Council feels that these physical effects should be expressed in both ex post terms (14 years lost per statistical life "lost") and ex ante terms (1.4 days per $\mu\text{g}/\text{m}^3$ fine particulates per person), the latter being the appropriate measure for valuation, the former used by some of the current valuation approaches." New Wording: " The Council feels that these physical effects should be expressed both in terms of the number of statistical lives saved annually (broken down by age), and in terms of shifts in the survival function of each person in the exposed population. The former approach is what is currently used in the study; the latter cannot yet be used because there are no empirical estimates of what people will pay for a shift in their survival functions.

Review of draft Advisory by the HEES

The Council concurred with the HEES draft Letter Advisory, "The Clean Air Act Amendments (CAAA) Section 812 Prospective Study of Costs and Benefits (1999): Advisory by the Health and Ecological Effects Subcommittee on Initial Assessments of

Health and Ecological Effects; Part 2" conditional on the following changes:

1. State that it is appropriate to use studies linking chronic asthma to ozone.
2. State that non-asthma ER visits can be listed as a non-quantified health endpoint.
3. Put before Introduction: A discussion of research needs, principal uncertainties. This would include the need for further research on exposure to HAPs; and further analysis of the impacts of low-dose exposure.
4. State that the link between Nitrates and PM and mortality is not well understood.

Dr. Larson agreed to provide the DFO with his editorial suggestions; Dr. Nugent agreed to forward them to Mr. DeMocker.

Review of August Draft of the Prospective Study

Dr. Paulette Middleton, Chair of the Air Quality Modeling Subcommittee, identified several items of concern: (1) need to acknowledge uncertainties in regard to modeling of emissions; (2) need to revise language in Executive Summary to reflect need for a unified, high quality air quality modeling system that would make disaggregation by title and different parts of the country feasible.

Dr. Paul Liroy, Chair of the Health and Ecological Effects Subcommittee, found the changes made in the August draft reasonable.

The Council then advised that several changes be made to the August 31 draft:
Major Changes Suggested in August 31 Draft

1. Add two types of uncertainties in Title VI analysis to Table 8-5: Uncertainties in the link between UV-b and melanoma, and failure of the damages associated with melanoma to incorporate averting behavior or improvements in treatment of melanoma.
2. Insert a section in Ch. 8 that discusses the Cost-Effectiveness of the 1990 CAAA. Present cost per life year saved figures as well as cost per life saved figures, after subtracting non-mortality benefits from costs. No interpretation of figures or comparison with the medical literature is required.
3. Exclude displaced cost estimates of benefits of reduced nitrogen deposition from Central Case estimates. Put estimates for 3 estuaries analyzed in Table 8-5. Extrapolation to East Coast estuaries appears only in appendix.
4. Relegate visibility benefits based on McClelland et al. to Table 8-5. Do not include them in the primary estimate.
5. Need more acknowledgment of tax interaction effects, including the large body of evidence that suggests that they increase the costs of environmental regulation. It should be noted that the 25-35% estimate of their impact on costs is conservative. (See Goulder et al. in the J. Pub. Econ.) Dr. Goulder to provide citations to the project team through the DFO, Angela Nugent.
6. The increase in health/productivity due to the CAAA is unlikely to reduce the magnitude of the tax interaction effect significantly (see Robertson Williams's paper), indeed, it might increase it if improvements in air quality are complementary to leisure.

This should be reflected in Table 8.-5.

7. Ch. 3 gives impression that direct costs are an unbiased estimate of compliance costs. The direction of bias is, indeed, to understate costs. That compliance costs may be overestimated because of pessimistic assumptions regarding technical change is a logically separate issue and should be treated as such.

8. The Monte Carlo analysis should be retained for parameter uncertainty, including uncertainty about cost estimates. It is reflected in the Fig. 1 of the Executive Summary for benefits. This figure should be updated to reflect cost uncertainty, using a uniform distribution over the cost ranges in Table 3-2. For cost estimates that do not appear in Table 3-2, a uniform distribution could be assumed around the point estimate in Table 3-1. For example, a uniform distribution could be assumed going from 0.5x to 1.5x, where x is the point estimate that appears in Table 3-1. Leave model/paradigm uncertainty to Table 8.5.

Minor Changes:

1. Table 8-5 should mention uncertainties re: emissions modeling in the Western US.
2. Third bullet on p. ES-6 needs to be reworded: "USE of integrated modeling tools ..."
3. Incorporate Mort Lippmann's changes in Chapter 5 and relevant portions of Ch. 8.
4. In Appendix H, note that Johannesson and Johansson value a change in life expectancy, not an additional year of life with certainty.
5. Explain why LEV costs were changed to \$95 instead of \$83. Provide better justification for the range of cost estimates.
6. Ch. 6: Benefits of reductions in upper respiratory symptoms. If match between symptoms measured in epidemiological studies and those valued in contingent valuation studies is imperfect, acknowledge that a benefits transfer has been used.
7. p. 7-19. Air quality and forest growth. Does the spike in Figure 7-1 reflect price effects of a large timber harvest? Put in footnote Canadian reaction to US harvests.
8. p. 7-23. Estimation of UV-b impacts on fish populations. Extrapolating impacts of UV-b on anchovies to all species seems a stretch. Justify or omit.
9. Has performance degradation been adequately incorporated into costs? If not, cite evidence to effect that it has a small impact on costs. Add to uncertainty Table 3-3.
10. Make changes noted in Table 8.3 by Don Fullerton. Label rows in benefits section of Table to indicate which rows pertain to Titles I-IV.

Action item(s):

1. Angela Nugent to identify a time for a follow-up teleconference as soon as possible

At 2:30 p.m., Dr. Cropper adjourned the meeting.
Respectfully Submitted:

Designated Federal Official

Certified as True:

Chair

NOTE AND DISCLAIMER: The minutes of this public meeting reflect diverse ideas and suggestions offered by the Council members and consultants (M/C) to the Agency during the course of deliberations within the meeting. Such ideas, suggestions and deliberations do not necessarily reflect definitive consensus advice from the Council M/C. The reader is cautioned to not rely on the minutes to represent final, approved, consensus advice and recommendations offered to the Agency. Such advice and recommendations may be found in the final advisories, commentaries, letters, or reports prepared and transmitted to the EPA Administrator following the public meetings.